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Instructions for use

A LIST OF THE BUTTERFLIES OF COREA,  
WITH DESCRIPTION OF NEW SPECIES,  
SUBSPECIES AND ABERRATIONS.

BY

PROF. DR. S. MATSUMURA.

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Butterflies of Corea, which are preserved in the Entomological Museum of the Hokkaido Imperial University, are in a total 177 species, and the following 5 species, 10 subspecies and 2 aberrations are new to science:

1. *Parnassius nomion chosensis* n. subsp.
2. *P. bremeri hakutozana* n. subsp.
3. *Luehdorfia puziloi coreana* n. subsp.
4. *Oeneis nanna coreana* n. subsp.
5. *O. nanna coreana okamotonis* n. ab.
6. *O. nauna walkyria shonis* n. ab.
7. *Coenonympha hero coreana* n. subsp.
8. *Argynnis hakutozana* n. sp.
9. *A. selenis chosensis* n. subsp.
10. *Limenitis pratti coreana* n. subsp.
11. *Lycaena optilete shonis* n. subsp.
12. *L. hakutozana* n. sp.
13. *L. putealis* n. sp.
14. *L. happensis* n. sp.
15. *L. hozanensis* n. sp.
16. *Zizera maha saishutonis* n. subsp.
17. *Heteropterus morpheus coreana* n. subsp.

In this occasion I shall describe, further, the following 2 new subspecies from the Kuriles and South-Manchuria (in foot-note).

1. *Melitaea didyma yugakuana* n. subsp.
2. *Lycaena optilete kurilensis* n. subsp.

## A LIST OF THE BUTTERFLIES OF COREA.

## PAPILIONIDÆ

1. *Papilio alcinous* KLUG.
2. " *machdon hippocrates* FELD.
3. " *xuthus* L.
- a). " *xuthus xuthus* BREM.
4. " *macilentus* JANS.
5. " *bianor bianor* CRAM.
- a). " *bianor dehaani* FELD.
6. " *maackii* MËN.
- a). " *maackii raddei* CRAM.
7. " *demetrius* CRAM.
8. " *sarpedon nipponus* FRUHS.
9. " *eurous* LËECH
10. *Sericinus telamon* LËECH
- a). " *telamon coreana* FIXS.
- b). " *telamon fixeni* STGR.
11. *Luehdorfia puzi'oi coreana* MATS. (n. subsp.)
12. *Parnassius nomion chosensis* MATS. (n. subsp.)
13. " *bremeri hakutozana* MATS.  
(n. subsp.)
14. " *citrinarius* MOTSCH.
15. " *stubbendorffii koreana* VËRITY

## PIERIDÆ

16. *Apporia crataegi adherbal* FRUHS.
17. " *hippia* BREM.
18. *Leptidia amurensis vibi'ia* JANS.
19. " *sinapis morsei* FENT.
20. *Pieris canidia* SPARM.
21. " *rapae* L.
- a). " *rapae crucivora* BOISD.
22. " *melete aglaope* MOTSCH.
- a). " *melete dulcinea* BTLR.
23. " *napi nesi* FRUHS.
24. *Leucochloe dapudicë* L.
25. *Midea scolymus* BTLR.
26. *Gonepteryx aspasia acuminata* FELD.
27. " *rhamni* L.
- a). " *rhamni amurensis* GRAES.
28. *Colias hyale* L.
- a). " *hyale poliopteryx* MOTSCH.
- b). " *hyale aurora* ESP.
29. " *palaeno orientalis* STGR.
30. *Eurema laeta* BOISD.
31. " *hecabe* L.

## DANAIDÆ

32. *Danaïs sita nipponica* MOOR. (Saishuto)

## SATYRIDÆ

33. *Erebïa ligea sachalinensis* MATS.
34. " *sedakovi nipponica* JANS.
35. " *edda* MËN.
36. *Ypthima argus evanescens* BTLR.
37. " *motschulskyi* BREM. et GREY
38. " *obscura* ELW. et EDW.
39. *Melanargia halimede meridionalis* FELD.
- a). " *halimede coreana* OKAM.
40. *Oeneis nanna walkyria* FIXS.
- a). " *nanna shonis* MATS. (n. subsp.)
- b). " *nanna masuiana* MATS.
- c). " *nanna coreana* MATS. (n. subsp.)
- d). " *nanna okamotonis* MATS. (n. subsp.)
41. " *jutta* HB.
42. *Satyrus dryas bipunctatus* MOTSCH.
43. *Pararge deidamia erebia* BTLR.
- a). " *deidamia okuni* FRUHS.
44. " *achine achinoides* BTLR.
45. *Aphantopus hyperantus ocellatus* BTLR.
46. *Lethe diana* BTLR.
- a). " *diana fixeni* BTLR.
47. " *scicelis* HEW.
48. " *marginais* MOTSCH.
49. " *epimenides* MËN.
50. " *schrenkii* MËN.

51. *Mycalasis francisca perdiccas* HEW.
52. " *gotama* MOOR.
53. *Coenonympha hero coreana* MATS. (n. subsp.)
54. " *amaryllis accrescens* STGR.
55. " *oedippus annulifer* BTLR.
56. *Melanitis leda determinata* BTLR.
- a). " *leda ismene* CRAM.

## NYMPHALIDÆ

57. *Meitaea aurinia mandschurica* STGR.
58. " *athalia nippona* BTLR.
59. " *phoebe scotosia* BTLR.
60. " *protomedia* MËN.
61. *Argynnis oscarus australis* GRAES.
62. " *selenis chosensis* MATS. (n. subsp.)

63. *Argynnis selene dilutior* FIXS.  
 a). " " *perryi* BTLR.  
 64. " *aglaia fortuna* JANS.  
 65. " *ino amurensis* FRUHS.  
 66. " *daphne fumida* BTLR.  
 67. " *adippe coreidippe* LEECH  
 a). " " *vorax* BTLR.  
 b). " " *pallens* BTLR.  
 c). " " *xanthodippe* FIXS.  
 68. " *nerippe coreana* BTLR.  
 a). " " *chlorotis* FRUHS.  
 69. " *laodice japonica* MËN.  
 a). " " *arcana* FRUHS.  
 70. " *ruslana lysippe* JANS.  
 71. " *sagana liane* FRUHS.  
 72. " *paphia paphioides* FRUHS.  
 73. " *anadyomene parascides* FRUHS.  
 74. " *hyperbius* JOHANS.  
 75. *Pyrameis indica* HERBST  
 76. " *cardui* L.  
 77. *Vanessa io geisha* STICH.  
 78. " *urticae connexa* BTLR.  
 79. " *xanthomelas japonica* STICH.  
 80. " *antiopa* L.  
 81. " *canace non-japonica* SIEB.  
 82. *Polygrapha c-aureum* L.  
 83. " *c-album hamigera* BTLR.  
 a). " " *lunigera* BTLR.  
 84. " *l-album samurai* FRUHS.  
 85. *Araschnia levana* L.  
 a). " " *porina* OLIV.  
 b). " " *prorsa* L.  
 86. " *burejana* BREM.  
 a). " " *fallax* JANS.  
 b). " " *strigosa* BTLR.  
 87. *Neptis hylas intermedia* BTLR.  
 88. " *pryeri* BTLR.  
 89. " *coenobita insularum* FRUHS.  
 a). " " *synetarius* FRUHS.  
 90. " *alvina kaempferi* FORZ.  
 91. " *philyra excellens* BTLR.  
 92. " *tisbe deliquata* STICH.  
 93. " *themis* LEECH  
 94. *Limenitis sydyi latifasciata* MËN.  
 95. " *amphysa* MËN.  
 96. " *sibilla* MËN.  
 97. " *pratti coreana* MATS. (n. subsp.)  
 98. " *helmanni* LED.  
 a). " " *pryeri* MOOR.  
 99. " *populi ussuriensis* STGR.

100. *Limenitis doerriest* STGR.  
 101. *Apatura schrenkii* MËN.  
 102. " *nycteris* MËN.  
 103. " *iris amurensis* STICH.  
 104. " *ilia substituta* BTLR.  
 a). " " *bunea* H.S.  
 b). " " *here* FELD.  
 105. *Sephesa dichroa princeps* FIXS.  
 106. *Sasakia charonda coreana* LEECH  
 107. *Diagora japonica* FELD.  
 108. *Hestina assimilis* L.

## LYCAENIDÆ

109. *Rapala arata tyrianthina* BREM.  
 a). " " *luniger* SEITZ  
 110. " *micans* BREM.  
 111. *Thecla spini latior* FIXS.  
 112. " *pruni* L.  
 113. " *frunoides* STGR.  
 114. " *eximia* FIXS.  
 a). " " *fixseni* LEECH  
 115. " *hera* FIXS.  
 a). " " *fulva* FIXS.  
 b). " " *fulvofenestrata* FIXS.  
 116. *Zephyrus orientalis* MURR.  
 117. " *taxila japonica* MURR.  
 118. " *saphirina* STGR.  
 119. " *attilia* BREM.  
 120. " *betulae coreana* NIR.  
 121. " *enthea* JANS.  
 122. " *jonasi* JANS.  
 123. " *micaelis* OBERTH.  
 124. " *raphaelis* OBERTH.  
 125. *Niphandia fusca* BREM et. GREY  
 126. *Arhopala japonica* MURR.  
 127. " *turbata* BTLR.  
 128. *Chrysophanus phlaeus daimio* SEITZ  
 129. " *dispar auratus* LEECH  
 130. *Polymnatus boeticus* L.  
 131. *Everes argiades amurensis* HYNÉ  
 132. " *fischeri* EVERS.  
 133. *Lycaena argus micargus* BTLR.  
 134. " *eros erotides* STGR.  
 135. " *orion coreana* MATS.  
 136. " *cleobis* BREM.  
 137. " *euphemus chosensis* MATS.  
 (new name for *E. coreana* MATS. being preoccupied)  
 138. " *divina* FIXS.

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| 139. <i>Lycaena arionides</i> STGR.             | 158. <i>Hesperia maculata</i> BREM. et GREY        |
| 140. " <i>barine</i> LEECH                      | 159. " <i>zona</i> MAB.                            |
| 141. " <i>lycornias</i> BTLR.                   | 160. <i>Ismene acquilina</i> STGR.                 |
| 142. " <i>optilete shonis</i> MATS. (n. subsp.) | 161. <i>Aeromachus inachus</i> MËN.                |
| 143. " <i>icarus</i> ROTT.                      | 162. <i>Leptalina unicolor</i> BREM.               |
| 144. " <i>amandus amurensis</i> STGR.           | 163. <i>Ileteropterus morphi</i> MATS. (n. subsp.) |
| 145. " <i>hakutosana</i> MATS. (n. sp.)         | 164. <i>Pamphila silvius</i> KNOCH                 |
| 146. " <i>putealis</i> MATS. (n. sp.)           | 165. <i>Adopaea sylvatica</i> BREM.                |
| 147. " <i>hozanensis</i> MATS. (n. sp.)         | 166. " <i>leonina</i> BTLR.                        |
| 148. " <i>happensis</i> MATS. (n. sp.)          | 167. <i>Augiades sylvanus amurensis</i> MAB.       |
| 149. <i>Celastrina argiolus</i> L.              | a). " " <i>herculea</i> BTLR.                      |
| a). " " <i>ladonides</i> L'ORZ.                 | b). " " <i>venata</i> BREM. et GREY                |
| 150. <i>Zizera maha argia</i> MËN.              | 168. " <i>subhyalina</i> BREM. et GREY             |
| a). " " <i>saishutonis</i> MATS. (n. subsp.)    | 169. " <i>ochracea rikuchina</i> BTLR.             |
| 151. " <i>minimus</i> FUËSS.                    | 170. <i>Erynnis florinda</i> BTLR.                 |
- HESPERIDÆ
- |   |  |
|---|--|
| 152. <i>Lobocla bifasciata</i> BREM.    | 171. <i>Parnara guttata</i> BREM.                  |
| 153. <i>Celaenorrhinus asmara</i> BTLR. | 172. " <i>jansonis</i> BTLR.                       |
| 154. <i>Satarupa nymphalis</i> SPEY.    | 173. " <i>mathias</i> F.                           |
| 155. <i>Daimio tethys</i> MËN.          | 174. " <i>pellucida</i> MURR.                      |
| 156. " <i>sinica saishuana</i> OKAM.    | 175. <i>Halpe varia</i> MURR.                      |
| 157. <i>Thanaos montanus</i> BREM.      | 176. <i>Padraona dara flava</i> MURR.              |
|   | 177. <i>Rhopalocampta benjamini japonica</i> MURR. |

## DESCRIPTIONS OF NEW SPECIES, SUBSPECIES AND ABERRATIONS.

### ***Parnassius nomion chosensis*** n. subsp. (Pl. V, fig. 1, ♂)

Closely allied to the subspecies *mandchuriae* OBERTH.,\* but differs from it as follows:

♂. Wings of both sexes with a light shade of yellow. Primaries with a marginal series of small spots of which the lower three are much larger; submarginal series of lunular-spots narrower, so that the outer paler spots becoming broader, being semicircular in shape.

♀. The red ocelli to the secondaries, each spot of which is nearly the same with that of the male, with each a broad black ring and in the middle with a white pupil; the inner anal spot black, being not filled in with a red pupil; the lunular-series of the submarginal line defined outwardly by a broader paler spot-series.

Exp.—♂ 80–84 mm., ♀ 90 mm.

Hab.—Corea; 5 (3 ♂, 2 ♀) specimens were collected in the latter part of July by Dr. H. OKAMOTO and F. SHO at Mt. Hakuto.

\*OBERTHÜR, Étud. d'Entom. XIV, pt. 2, pl. 11 fig. 10 (1891).

***Parnassius bremeri hakutozana*** n. subsp. (Pl. V, fig. 5, ♂)

Closely allied to the subspecies *conjuncta* STGR., but differs from the latter as follow:

Two spots beyond the cell and one spot in the middle of the interspace 1<sup>b</sup> obsolete, the latter becoming linear; the ocellar spots much smaller.

♂. Submarginal band to the primaries distinct, reaching beyond the vein 2. The lower ocellar spot to the secondaries with or without a small red pupil; the submarginal band distinct, reaching nearly the anterior and posterior margins; no ocellar spot at the base.

♀. Primaries with the postdiscal and submarginal bands, while the secondaries with only one submarginal; at the base with one red ocellus.

Exp.—♂ 65–66 mm., ♀ 68–70 mm.

Hab.—Corea (Mt. Hakuto); 4 (2 ♂, 2 ♀) specimens were collected on the 3rd of August, 1926, by F. SHO at the peak of Mt. Hakuto.

***ab. inornata*** n. ab. (Pl. V, fig. 4, ♂)

♂. No marginal fuscous band, but with an obsolete submarginal one to the primaries.

Hab.—Corea (Mt. Hakuto); one male specimen was collected at the same place on the same day as the subspecies *hakutozana*.

***Luehdorfia puziloi coreana*** n. subsp.

Closely allied to *L. puziloi jezoensis* MATS., but differs from it as follows:

♀. All the yellowish bands to the primaries except that of the submarginal narrower, so that the black band becoming distinctly broader; the discal black band to the secondaries much broader, becoming broader towards the costa; tail much longer.

Hab.—Corea; one female specimen was collected on the 20th of June, 1925, by F. SHO at Kaishu and another female by Dr. H. OKAMOTO at Heizan.

***Oeneis nanna walkyria shonis*** n. ab. (Pl. V, fig. 2, ♀)

♀. Differs from the subspecies *walkyria* FIXS.\* in having to the primaries a very large ocellus in the interspace 2, which extends beyond the interspaces 1<sup>b</sup> and 3; 4 ocellar spots in the secondaries much elongated, each towards the base being somewhat pointed; underside of the secondaries with a small ocellus.

Hab.—Corea; one female specimen was collected on the 18th of July, 1926, by F. SHO at Mt. Daitoku.

***Oeneis nanna coreana*** n. subsp. (Pl. V, fig. 9, ♂)

♂. Differs from the typical specimen in having smaller non-pupillated

\*Rom. Mém Lep. T. III, p. 310, p. 355, pl. XIV, fig. 4, ♀ (1887).

ocelli to the primaries and 4 much smaller ones to the secondaries, that of the interspace 5 becoming a mere point; the basal parts to both wings not infuscated; the underside to the primaries with only a small ocellus in the interspace 2, while that of the secondaries in the same interspace being much smaller.

Hab.—Corea; one male specimen was collected in August, 1921, by S. HIRAYAMA at Genzan.

***Oeneis nanna coreana okamotoi* n. ab. (Pl. V, fig. 3, ♂)**

♂. Differs from the subspecies *coreana* in having 2 pupillated ocelli to the primaries and 4 subequal smaller ones to the secondaries, that of the interspace 5 being not pupillated; at the bases to both wings somewhat infuscated, leaving the ground colour in each apical part of the cells. Underside to the primaries with 2 pupillated ocelli; secondaries at the basal half strongly fuscous marmorated, with 2 very small pupillated ocelli, respectively in the interspaces 2 and 3.

Hab.—Corea; one male specimen was collected on the 19th of May, 1921, by Dr. H. OKAMOTO at Suigen (?).

***Coenonympha hero coreana* n. subsp.**

♂. Differs from the subspecies *neoperseis* FRUHS. in having only 3 ocelli to the secondaries, lacking that of the interspace 1, and a broader white band to the underside of the primaries, which reaches nearly the tornus.

Hab.—Corea; one male specimen was collected on the 18th of July, 1925, by F. SHO.

***Melitaea didyma yugakuana* n. subsp.**

Closely allied to the subspecies *didymoides* EV., but differs from it as follows:

♂. The maculation to both wings distinctly smaller.

Primaries near the base of the interspace 1<sup>b</sup> with a small ocellar black spot which is pupillated with the ground colour; at the base of the interspace 1<sup>b</sup> inside the ocellar spot with a small black spot; the marginal black band distinctly narrower.

Underside—The maculation distinct only at the upper half, especially in the cell and near the apex. Spots in the submarginal series distinct only in the interspaces 3, 4, 5 and 6.

Secondaries in the middle with a series of discal spots, 3 of which are at each base of the interspaces 3, 4 and 5, and much smaller; the marginal black band narrower.

Underside—The postdiscal reddish yellow band much broader.

Exp.—♂ 38 mm.

Hab.—South-Manchuria; one male specimen was collected on the 3rd of September, 1923, at the coast region in the Prov. Yugakujo.

***Argynnis hakutozana*** n. sp. (Pl. V, fig. 13, ♂)

Closely allied to *A. thore* HB., but differs from the latter as follows:

♂, ♀. Upperside—Most of the black spots to both wings smaller, especially those of the secondaries; the spots in the submarginal series in the male somewhat scalloped instead of being in a straight bar-series, of which that of the 3rd interspace is the largest, while in the female they are triangular except those of the interspaces 6 and 7; a spots-series in the middle of the marginal area much narrower, the spots of the interspaces 1 and 2 being subequal; in the female the basal part to the secondaries not infuscated, with a roundish black spot near the base.

Underside—The second black spot in the cell to the primaries much longer, in the middle with a linear spot of the ground colour, the 3rd spot scarcely excurved in the middle; the submarginal spot-series to both wings nearly the same with that of the upperside; secondaries at the base with a series of 3 silvery spots; near the middle of the cell with a small black speck, being encircled with white; the prediscal yellow spot-series, except the spot at the costa and the inner lining at the interspace 1<sup>b</sup> which are silvery white, nearly the same; the postdiscal silvery band distinctly broader, especially at the costa.

Exp.—♂ 48 mm., ♀ 54 mm.

Hab.—Corea; one male was collected on the 26th of July, 1926, at Hozan and one female on the 31st of the same month at Mt. Hakuto (Miikebuchi) by F. SHO.

***Argynnis selenis chosensis*** n. subsp. (Pl. V, fig. 6, ♂)

Closely allied to the subspecies *onorensis* MATS.,\* but differs from it as follows:

♂. Upperside—Submarginal series of black lunules to both wings somewhat nearer the termen, so that the marginal band of the ground colour is much narrower and linear, while in *onorensis* it becomes semicircular in each interspace.

Underside—Submarginal series of white spots capped with each a black lunule, while in *onorensis* lacking the black lunules, at least in the interspaces 3 and 7; no ocellar spot in the interspace 3 as in *onorensis*.

Hab.—Corea (Shuotsu); one male specimen was collected on the 20th of August, 1926, by S. ITO.

***Limenitis pratti coreana*** n. subsp. (Pl. V, fig. 14, ♀)

Differs from the typical specimen as follows:

♀. Upperside—Primaries with much smaller white spots, the submarginal spot-series being obscurely traceable.

\*Journ. Coll. Agr. Hok. Imp. Univ. Sapporo, Vol. XV, p. 100, pl. XIII, fig. 1, ♂ (1925).



Secondaries with a much narrower central white band, the reddish spots also being smaller; the submarginal series of white spots obsolete, being like that of the primaries; the terminal line narrower and of a greyish colour.

Underside—The markings correspond to those of the upperside.

Primaries in the cell with only 2 spots; beyond the cell a yellowish patch; a very faint trace of a reddish spot in the interspace 1<sup>b</sup>; the marginal and submarginal series of white spots distinct; the central white band like that of the upperside.

Hab.—Corea; one female specimen was collected on the 10th of August, 1921, by Y. HASEGAWA at Shokoji.

***Lycaena optilete shonis* n. subsp.**

Closely resembles the subspecies *sibiricus* STGR., but differs from it as follows:

♂. Upperside—Wings larger and broader, being dark bluish in colour, having no reddish tinge.

Underside—Distinctly with larger maculation, especially the reddish spots in the interspaces 1<sup>b</sup> and 2 being much larger and conspicuous.

♀. Underside—Only one reddish spot in the interspace 1<sup>b</sup> to the secondaries.

Exp.—♂ 30 mm., ♀ 29 mm.

Hab.—Corea; one female specimen was collected on the 30th of July, 1925, at Mt. Hakuto and 2 males on the 16th of July at Happa in the Prov. Kankyonando by F. SHO.

***Lycaena hakutozana* n. sp. (Pl. V, fig. 11, ♂)**

♂. Upperside—Dark brown, costa very narrowly white, the discocellular spot bar-like, deeper in colour; fringe snowy white, at the basal half being dark brown.

Underside—The maculation closely allied to that of *L. astrache* BGSTR., dark grey, all the black spots surrounded with each a white ring; a submarginal series of reddish yellow ocellar spots, each spot being mostly defined on both sides by a fuscous and white spot, excepting those of the first 3 interspaces to the primaries which lack the internal white spots; the discocellular

***Lycaena optilete kurilensis* n. subsp.**

♂. Compared with the subspecies *sibiricus* STGR. much smaller, having a very small maculation to both wings on the underside, lacking spots almost on the termen to the primaries and the reddish spot to the secondaries, being only visible in the interspace 1<sup>b</sup>, but not very conspicuous.

Exp.—♂ 37 mm.

Hab.—Kuriles; 7 male specimens were collected on the 6th of August, 1926, at Horomushuru by K. DOI.

spot large, linear; postdiscal series of black spots composed of 6, the first 4 being oblong in shape, while 2 in the interspaces 5 and 6 being roundish, that of the 2nd interspaces being placed much interiorly than those of the 1st and 3rd interspaces; fringe white, mixing some fuscous scales at each end of the longitudinal vein; the extreme termen narrowly fuscous.

Secondaries at the base with a row of 4 spots; the discocellular spot narrow, linear; the postdiscal series composed of 7 spots, of which 3 are respectively in the interspaces 3, 4 and 5, and placed far apart outwardly in a straight line; the interspaces 3 and 4 at the innerside of the submarginal series maculated with white; fringe nearly the same with that of the primaries.

Exp.—♂ 29 mm.

Hab.—Corea; one male specimen was collected on the 16th of July, 1925, by F. SHO at Happa.

This is quite easy to distinguish from the species *L. astrache* BGSTR. in lacking the submarginal series of reddish spots to the upperside of both wings.

***Lycaena putealis* n. sp.** (Pl. V, fig. 8, ♂)

♂. Dark brown, with a violet bluish shade, in some light reflecting a golden green tinge; primaries at the costa near the base with some whity bluish scales, the longitudinal veins reflecting mostly a greenish colour; fringe white.

Secondaries towards the base with a violet shade; fringe white.

Underside pale grey, towards the base bluish white; all the fuscous spots surrounded with each a white ring.

Primaries with the discocellular spot elongated, spots of the prediscal series larger, that of the interspace 2 being placed somewhat inwardly than that of 3, the spots in the interspaces 3, 4, 5 and 6 nearly in a straight line, slightly excurving; an obsolete series of submarginal spots which are only visible at the lower end; the extreme termen narrowly infuscated; fringe white.

Secondaries towards the base black, with numerous bluish white scales, the prediscal series of spots composed of 3, respectively one in the interspace 7, one in the cell and the rest in the interspace 1<sup>b</sup>; the discocellular spot elongated; the postdiscal series of spots composed of 8, 3 of which are respectively in the interspaces 1, 2 and 7 in a straight line, that of the 2nd interspace being oval in shape, 4 respectively in the interspaces 3, 4, 5 and 6 being placed in a strong curve, while the rest in the interspace 1<sup>a</sup> placed far apart internally; a double submarginal series of spots more conspicuous than that of the primaries, the outer series being composed of roundish spots; the termen and fringe like those of the primaries.

Exp.—♂ 26 mm.

Hab.—Corea; one male specimen was collected on the 4th of August,

1926, by F. SHO at Mt. Hakuto (Miikebuchi).

So far as I know, any known species of the genus *Lycaena* does not resemble this species.

***Lycaena happensis* n. sp.** (Pl. V, fig. 12, ♀)

♀. Upperside—Wings fuscous, without any bluish scales; fringe concolorous with the wings, mixing some white scales.

Underside—Dark grey; the maculation to both wings somewhat resembles that of *L. lycormas* BTLR., but distinctly larger, especially in the secondaries, all the spots being oblong, surrounded with each a white ring; fringe white.

Primaries—The discocellular spot linear; spots of the postdiscal series, except one spot in the interspace 6 which is placed far apart internally, in a straight line parallel to the termen.

Secondaries—At the base somewhat bluish; the prediscal series of spots composed of 2, respectively one in the interspace 7 and another in the cell, the latter being somewhat smaller than the former; the discocellular spot as that of the primaries; the postmedial series of spots composed of 8, respectively one in each interspace, of which 4 in the interspaces 1<sup>a</sup>, 2, 7 and 8 are in a straight line, and 3 in the interspaces 3, 4 and 5 far apart externally and in an oblique line, one spot in the interspace 1<sup>b</sup> placed somewhat apart externally and divided into 2.

Exp.—♀ 30 mm.

Hab.—Corea; one female specimen was collected on 17th of July, 1925, by F. SHO at Happa.

***Lycaena hozanensis* n. sp.** (Pl. V, fig. 10, ♀)

♂. Underside—Fuscous, scattered with some bluish scales especially in the disk, those of the secondaries being distinctly scarcer; fringe white, at the base somewhat fuscous.

Primaries with a very faint trace of wavy, darker submarginal band; the discocellular spot black, conspicuous, and of a lunular form.

Secondaries with a very faint trace of a double, wavy postdiscal band as that of the primaries; the discocellular spot obsolete.

Underside—Dark grey, with oval black spots, surrounded with each a white ring; termen narrowly fuscous; fringe white, at each end of the longitudinal vein with some fuscous scales.

Primaries—The discocellular spot large, lunular, with a black spot\* at the inner side of it; the postdiscal series of spots composed of 6, of which 4 are

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\*—No black spot in the right wing.

in an oblique line parallel to the termen and the remaining 2, respectively in the interspaces 5 and 6, nearly in a line perpendicular to the costa; a double submarginal series of spots fuscous, that of the outer being obsolete and each spot defined outwardly by a paler greyish bar.

Secondaries at the base with a light shade of blue; prediscal series of spots composed of 3 in a straight line, respectively one in the interspace 7 which is very small, one in the cell below the median fold, and one in the interspace  $r^a$  being nearly in the same size with that of the middle; the discocellular spot somewhat geniculated in the middle outwardly and much narrower than that of the primaries; the postdiscal series of spots which are somewhat smaller than those of the primaries, composed of 7, of which 4 are nearly in a straight line, the remaining 3 in an oblique line, so that the series runs parallel to the termen, the submarginal series of spots being just like that of the primaries.

Exp.—♂ 33 mm.

Hab.—Corea; one male specimen was collected on the 27th of July, 1926, by F. SHO at Hozan in the Prov. Kankyonando.

The maculation of the underside of wings closely allied to that of *euphemus* Hb.

***Zizera maha saishutonis* n. subsp. (Pl. V, fig. 7, ♂)**

Closely allied to the subspecies *argia* MÉN., but differs from it as follows:

♂. Upperside—Primaries at the costa except the apex broadly whitish; along the termen with a submarginal series of pale bluish white spots, each spot becoming smaller towards the costa.

Secondaries along the termen with a submarginal series of roundish fuscous spots, each spot being surrounded with a white ring.

Underside darker, the maculation, except that of the submarginal series, distinctly smaller; the submarginal series of spots distinctly larger, that of the secondaries being conspicuously scalloped.

Hab.—Corea (Quelpart-Isl.); one male specimen was collected by S. ICHIKAWA at Saishuto.

***Heteropterous morpheus coreana* n. subsp.**

Differs from the typical specimen as follows:

♀. Upperside—Primaries much darker; along the termen with an obsolete yellowish submarginal band; near the base of the 3rd interspace with a linear yellowish spot; no spot in the secondaries.

Underside—Primaries darker than the upperside, with 5 yellowish spots, respectively one in the cell near the apex, one near the middle of the interspace 3, which is somewhat larger than that of the cell, the remaining 3 in the inter-

spaces 6, 7 and 8 and being much larger; the submarginal golden yellow band longer, ending near the middle of the interspace 2, being strongly sinuated internally.

Secondaries—Ocellar spots distinctly smaller, reflecting a silky luster; the submarginal band much broader.

Exp.—♀ 32 mm.

Hab.—Corea; one female specimen was collected on the 30th of July, 1926, by F. SHO at Mt. Hakuto.

## 摘 要

### 朝鮮産蝶類の目録と新種の記載

當大學の昆蟲室には百七十七種の朝鮮産蝶種を有するが、其の内下の種類は學術界に新しきものなり。

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|--|---------------|
| 1. <i>Parnassius nomion chosensis</i> MATS. (n. subsp.)    | オホアカボシウスバシロテフ |
| 2. <i>P. bremeri hakutozana</i> MATS. (n. subsp.)          | アカボシウスバシロテフ   |
| 3. <i>Luehdorfia puziloi coreana</i> MATS. (n. subsp.)     | ヒメギフテフ亞種      |
| 4. <i>Oeneis nanna coreana</i> MATS. (n. subsp.)           | テフセンタカネヒカゲ亞種  |
| 5. <i>O. nanna coreana okamotoi</i> MATS. (n. ab.)         | 同上異常形         |
| 6. <i>O. nanna walkyria shonis</i> MATS. (n. ab.)          | 同上異常形         |
| 7. <i>Coenonympha hero coreana</i> MATS. (n. subsp.)       | シロチビヒメヒカゲ亞種   |
| 8. <i>Argynnis hakutozana</i> MATS. (n. sp.)               | ハクトウヘウモン      |
| 9. <i>A. selenis chosensis</i> MATS. (n. subsp.)           | チビヘウモン亞種      |
| 10. <i>Limenitis pratti coreana</i> MATS. (n. subsp.)      | ベニボシイチモンジ     |
| 11. <i>Lycaena optilete shonis</i> MATS. (n. subsp.)       | カラフトミドリシバミ亞種  |
| 12. <i>L. hakutozana</i> MATS. (n. sp.)                    | ハクトウツシバミ      |
| 13. <i>L. putealis</i> MATS. (n. sp.)                      | ミイケシバミ        |
| 14. <i>L. happensis</i> MATS. (n. sp.)                     | ハツパシバミ        |
| 15. <i>L. hozanensis</i> MATS. (n. sp.)                    | ホウザンシバミ       |
| 16. <i>Zizera maha saishutonis</i> MATS. (n. subsp.)       | ヤマトシバミ亞種      |
| 17. <i>Heteropterus morpheus coreana</i> MATS. (n. subsp.) | テフセンキボシセハリ    |

尙序に南滿州産及び千島産の蝶類の新しき二亞種を記載することとせり。即ち下の如し。

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|---|--------------|
| 1. <i>Melitaea didyma yugakuana</i> MATS. (n. subsp.)   | ユウガクヘウモン     |
| 2. <i>Lycaena optilete kurilensis</i> MATS. (n. subsp.) | カラフトミドリシバミ亞種 |